ESO

ASA(ALT)
Environmental
Support
Office

Linking the Worlds of Acquisition and Installations

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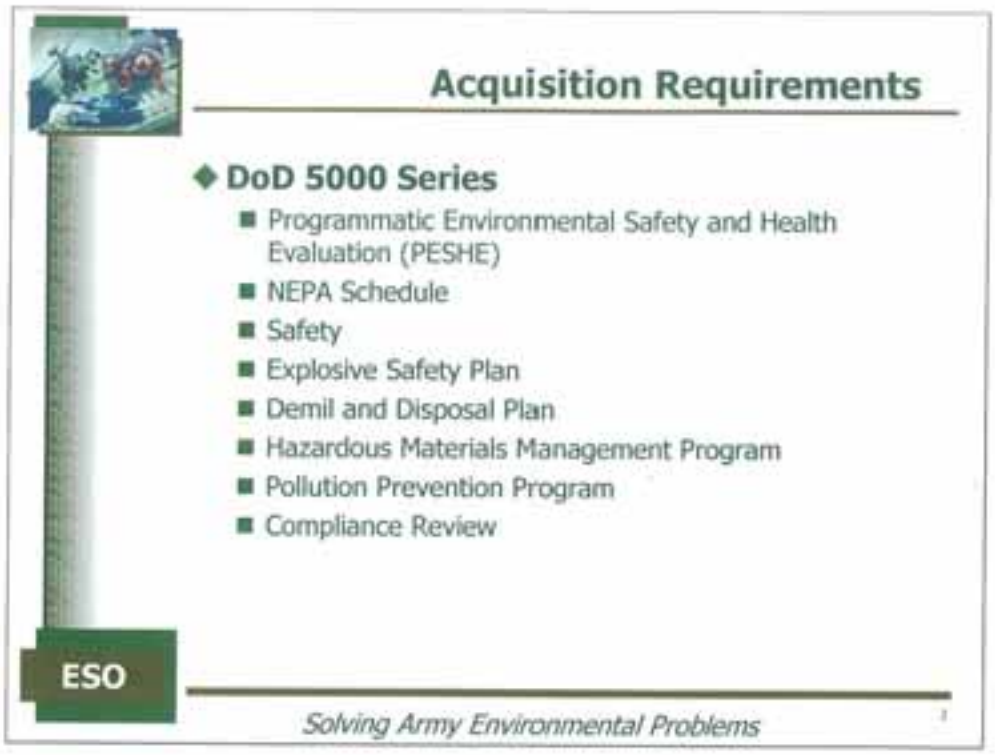


The acquisition community has a number of environmental, safety, and health requirements for Acquisition Category systems. I'll describe a couple of these for you.

The PESHE is a programming and planning document prepared and used by Acquisition Managers to address how they will integrate environment, safety and occupational health considerations into their acquisition program. The PESHE includes discussions addressing each of the areas listed below it. The PESHE is updated throughout the program life-cycle and is usually reviewed prior to milestone decision points to assure ESOH initiatives are proceeding.

The compliance review is intended to look at environmental statutes that may influence the program's ability to construct, test, operate, maintain, and field the system. It allows the PM to take action on issues that may be influenced by encroachment or restrictions on uses of certain chemicals or materials. An example would be a European Union regulation preventing the import of a certain substance, such as untreated wood packaging products.

To assist the acquisition community in meeting the DoD 5000 series requirements, ASA(ALT) has established the Environmental Support Office (ESO), directed by Mr. Pete Stemniski.

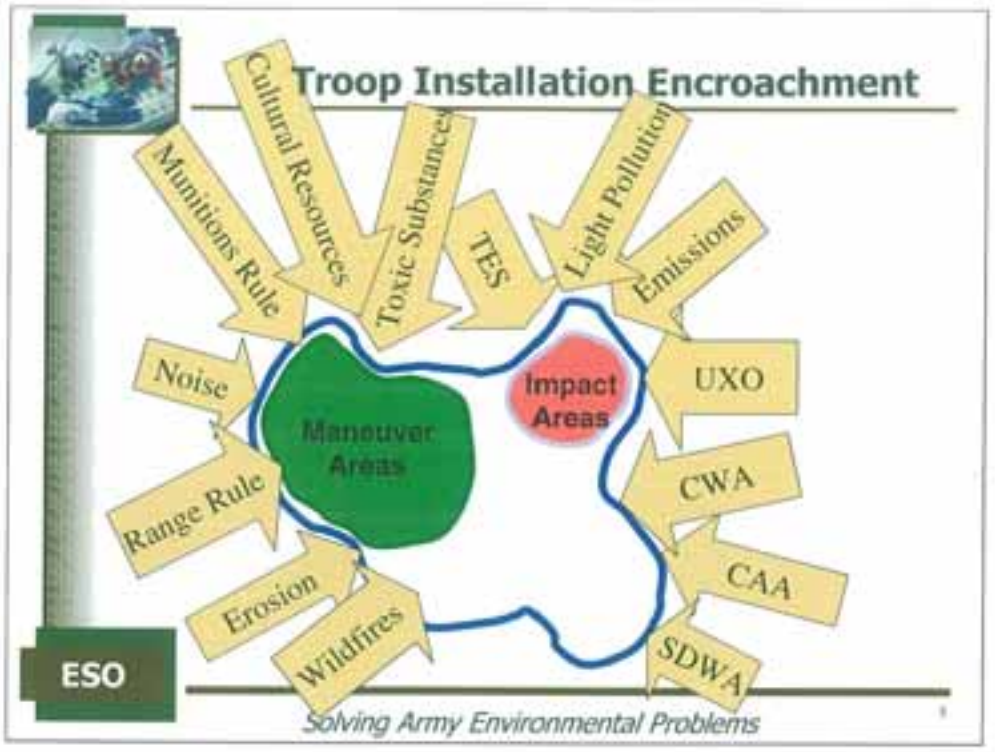
ESO is the ASA(ALT) agent for all acquisition and industrial base pollution prevention and affirmative procurement initiatives.

We represent ASA(ALT) on Army Environmental Programs; Provide direct support to PEOs and PMs; Evaluate RDT&E Programs; and Coordinate with ASA(I&E) and ACSIM on weapon system environmental supportability.

Displayed is a very simplified weapon system life-cycle. ESO has been traditionally involved in pollution prevention programs aimed at removing hazardous materials from the production, maintenance, and demil of weapon systems.

Through the coordination of commodity IPTs associated with the MSCs under AMC, ESO made great strides in removing hazardous materials from specifications and standards used to produce our weapon systems.

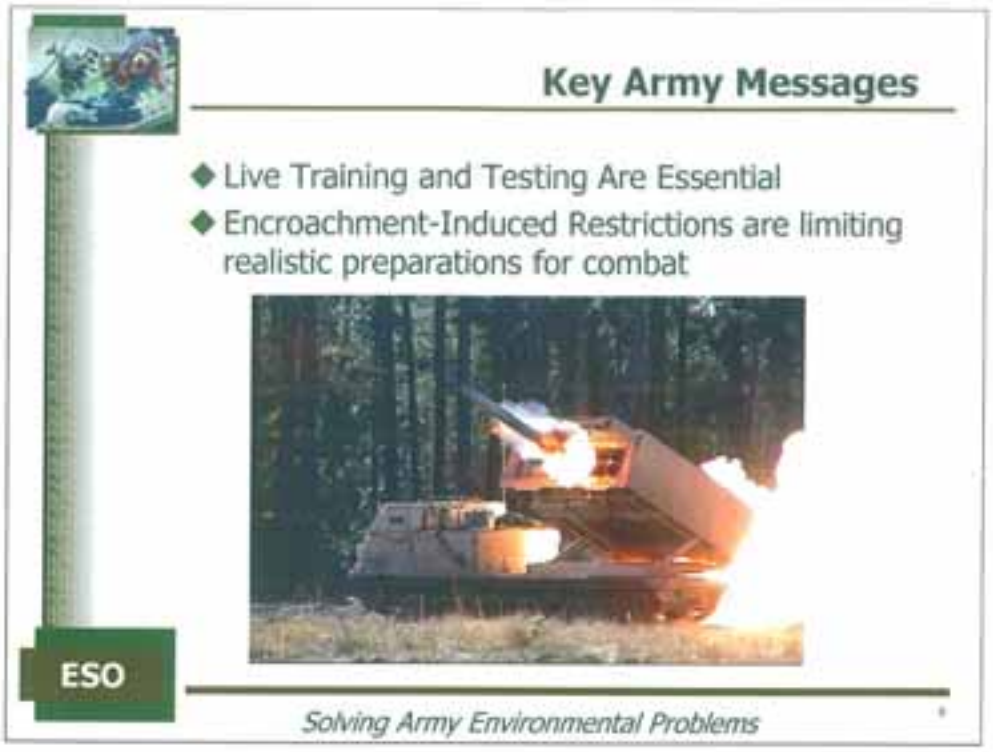
However, this approach could only take us so far – for example, it's pretty hard to remove chromium from a chromium plating specification. We also realized we were leaving out a large piece of the puzzle… Troop Installations.



I'm sure you've all seen some version of this slide. It has come to represent how the Army and DoD conceptualize the constraints placed on its installations due to ever increasing environmental regulation and public awareness and concern.

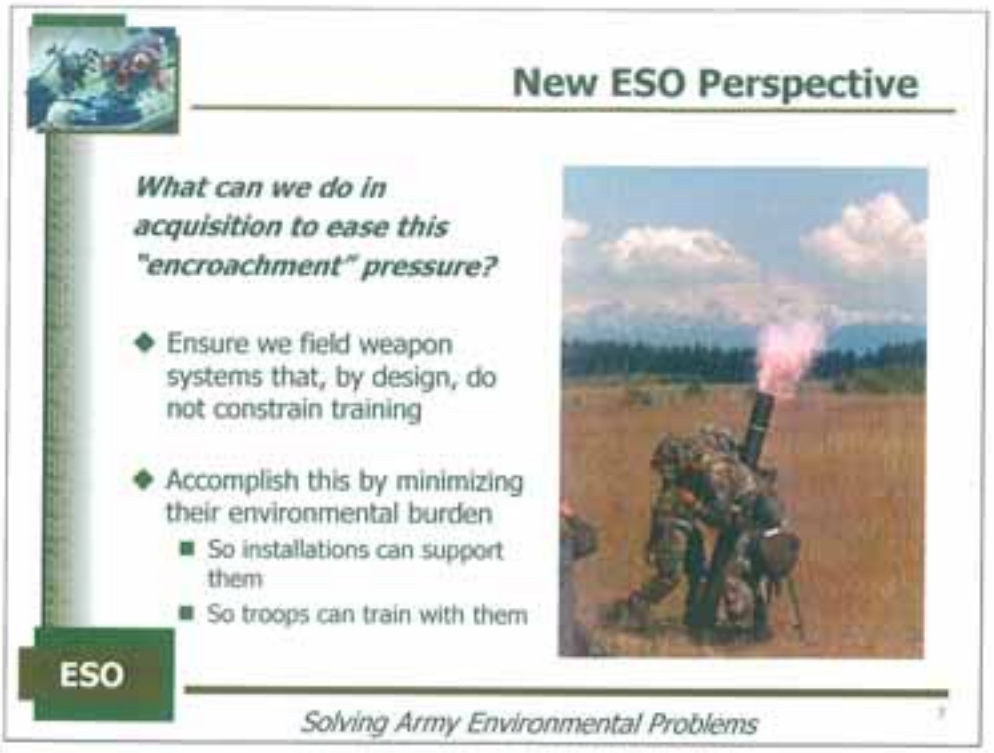
The term encroachment is used broadly to lump all these constraints together. It encompasses not only the traditional pollution issues, but also those more difficult to get one's arms around, like watersheds and total maximum daily loads, airsheds and attainment zones, erosion, light, noise.

The complicating factor is that these issues can not be tackled by the installation independently, but must be addressed in coordination with regional communities.



And we've got to find ways to address these issues without constraining the mission – that is preparing out soldiers to perform under high stress conditions.

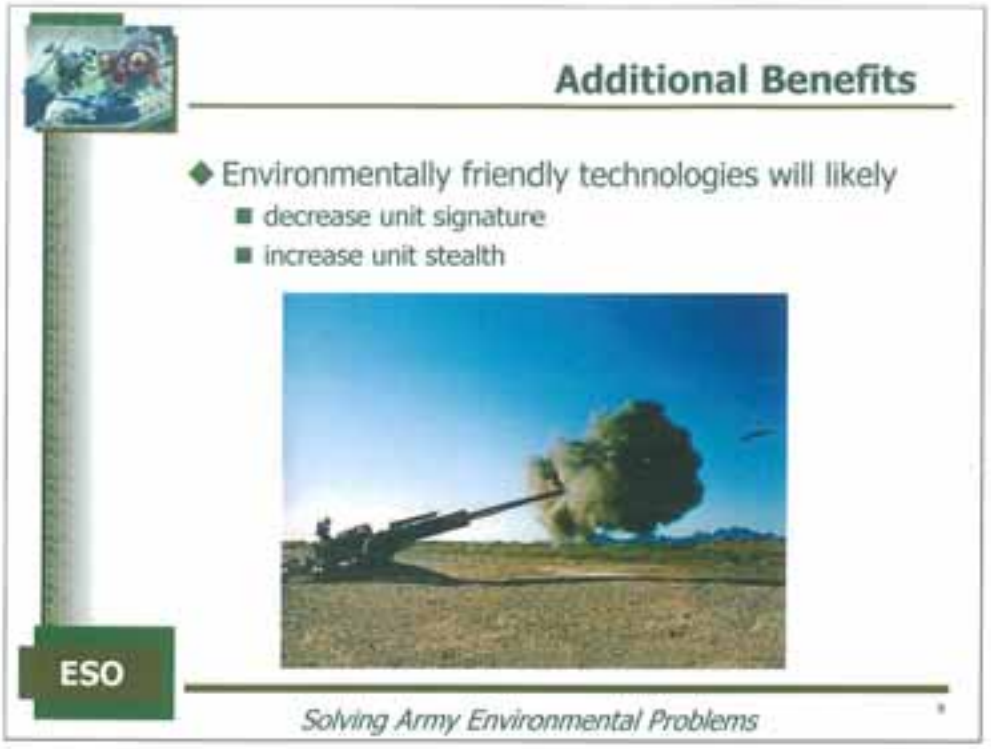
Training models and simulations can't replace live, realistic training.



So ESO asked…What can we do in acquisition to ease this "encroachment" pressure?

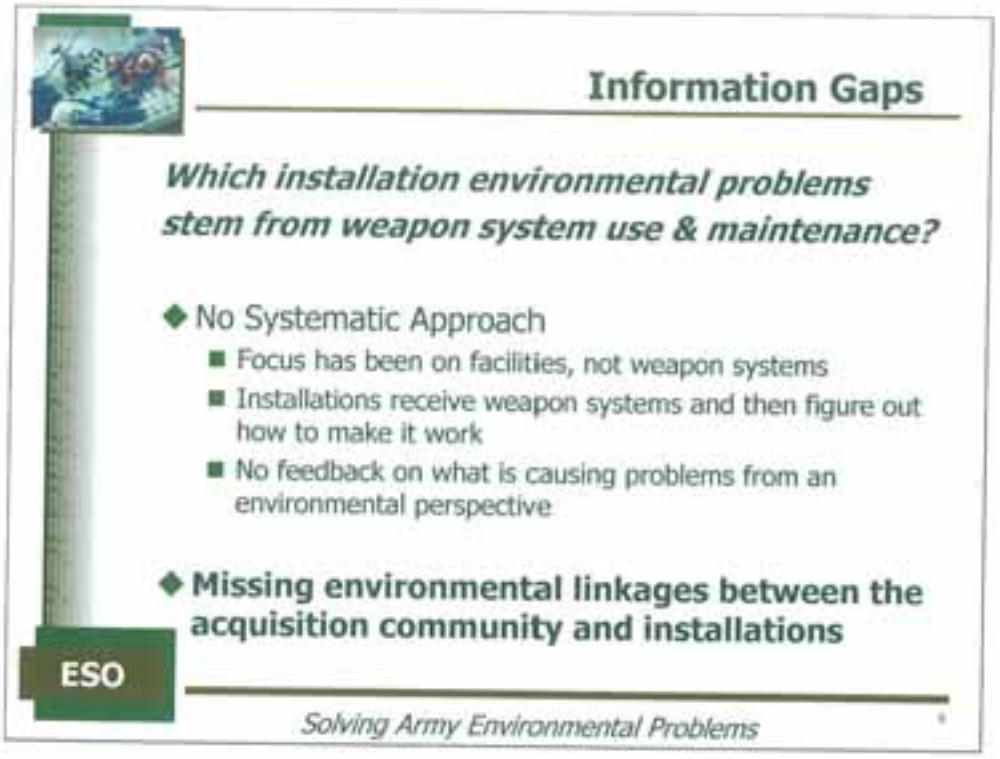
We need to ensure we field weapon systems that, by design, do not constrain the mission.

We need to accomplish this by minimizing their environmental burden so installations can support them and troops can train with them now and into the future.



In asking such questions, we also realized that in addition to fielding weapon systems that do not constrain training at our installations, environmentally friendly technologies are likely to decrease a unit's signature and logistics tail and increase the unit's stealth and survivability.

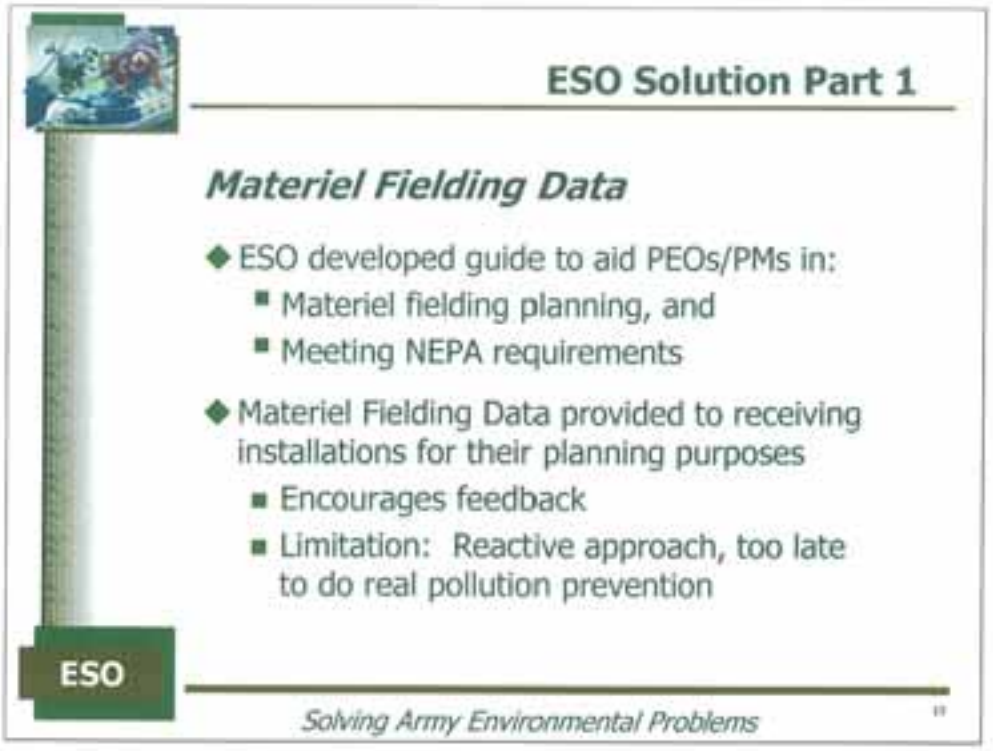
A very simple example is fuel cells which can create a quieter vehicle and reduce air emissions, the potential for fuel spills, and the unit's need for conventional fuel.



ESO's first challenge is to determine which installation environmental problems stem from weapon system use and maintenance.

We found that the Army has no systematic way of collecting this information. The focus has been on facilities, not weapon systems; Installations generally receive weapon systems and then figure out how to make it work at their particular location; and no feedback is provided on what is causing problems from an installation environmental perspective.

In general, the Army is missing the environmental linkages between the acquisition community and installations. This is a significant information gap if we intend to reduce encroachment pressures. After all, if we didn't have weapon systems we wouldn't have an encroachment problem.



ESO's first effort was to spearhead the creation of a Materiel Fielding Data Questionnaire.

The questionnaire serves as a guide to PEOs and PMs on what environmental considerations need attention from an installation perspective. The information can be provided to the installation for their planning purposes, and feedback from the installations should be encouraged.

However, if the information is delivered with the Materiel Fielding Plans it is too late; it is very difficult to induce change after weapon system configuration has been established. ESO emphasizes to Acquisition Managers the value of getting the installation community involved early and up front. This lesson was learned…

…by PM Brigade Combat Team (PM BCT). ESO and PM BCT asked Ft. Lewis to identify installation issues impacted by Stryker. Ft. Lewis provided this wish list.

PM BCT evaluated each issue and provided a response back to Ft. Lewis. Some issues they could address, but for others it was too late in the design process to make the required changes and, therefore, must wait to be reevaluated during future Stryker buys.

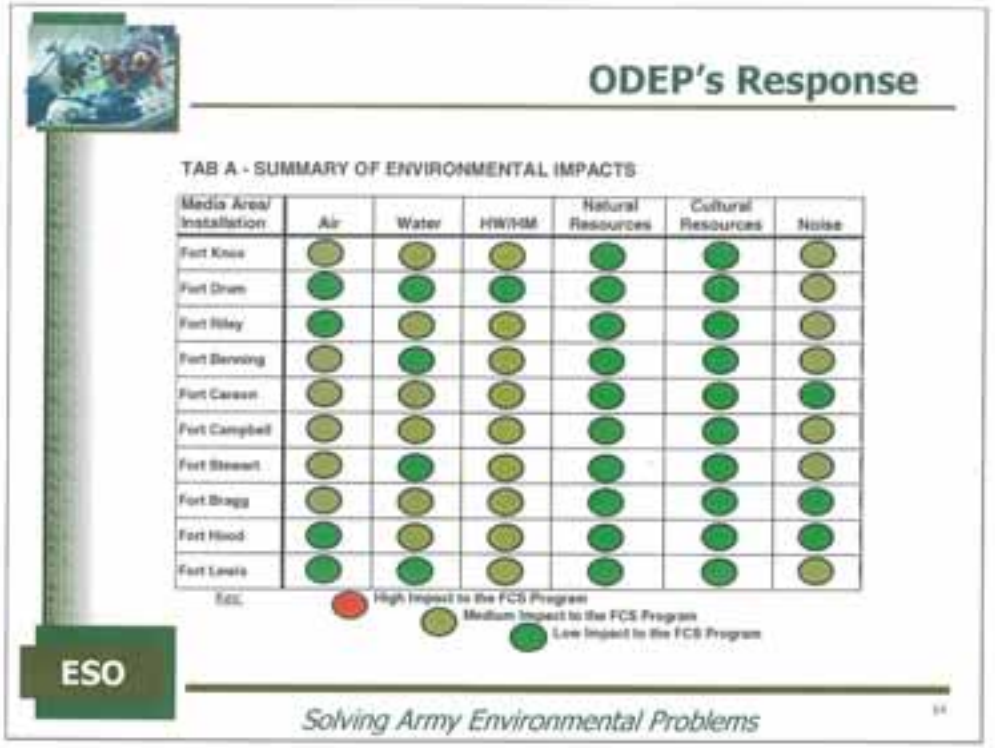
So, back to our simplified weapon system life cycle. ESO's future focus is to gather installation encroachment issues and bring them back to the acquisition community for consideration in weapon system design.

But don't let this simplified chart fool you. This has turned out to be more difficult that we first imagined.

The goal is to insert environmental considerations EARLY in the acquisition process. To do this effectively and efficiently we need data to influence design; Influence technology development; and Reduce the risk of aggregate impacts when suite of systems or activities come together at a single location.

PM Unit of Action (PM UA) formally asked the installation community for specifics about installations so it could be proactive and target known problem areas during the design of Future Combat Systems.

For years the Army has maintained a host of databases filled with environmental information and PM UA hoped to put this data to use. However…

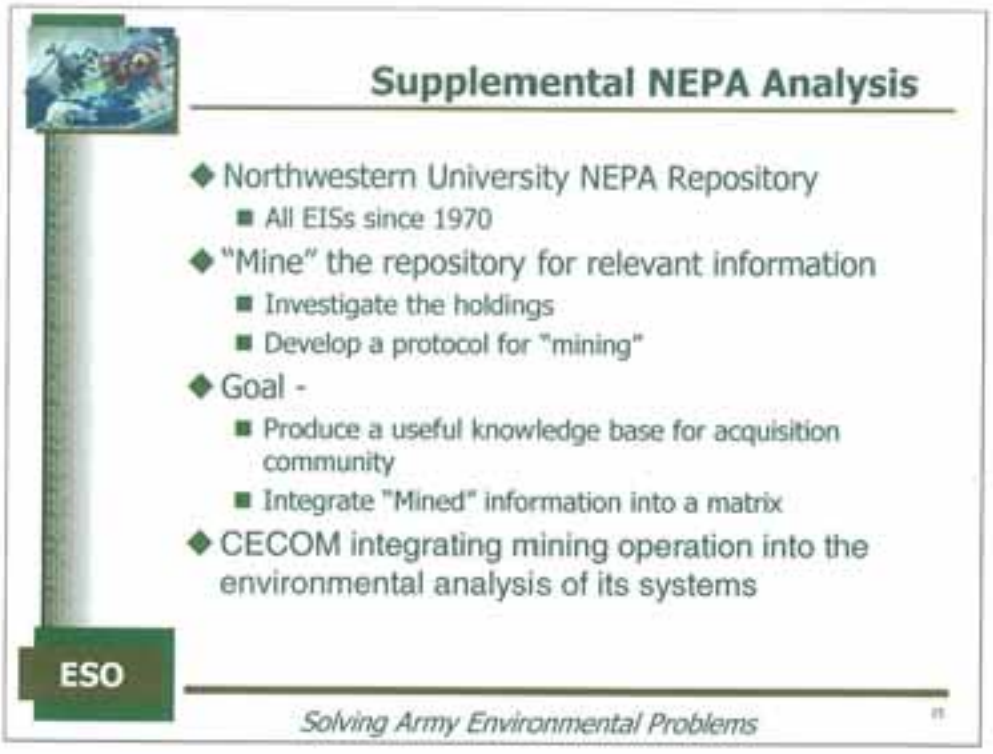


…the response provided by the Office of the Director of Environmental Programs, summarized by this table, suggests weapon systems are incidental to installation encroachment. This is hard to believe because if we didn't have weapon systems we wouldn't have an encroachment problem.

This is not meant to discredit ODEP. The root of the problem is that the Army has been stuck in a reactive mode and has not designed its environmental programs to answer the questions we are now asking.

Just a quick note about this slide – no decisions have been made as to where FCS will be fielded. The installations listed here were included in the analysis simply as the Army's 10 Power Projection Platforms.

So where do we go from here?



One direction we're pursuing is using past analyses to target those issues that matter. ESO has teamed with the Communications and Electronics Command (CECOM) to take a look at lessons learned from historical NEPA data.

The result is the development of a Leopold matrix that will allow a PM developing C-E equipment to target environmental issues based on the projected configuration and capability of that equipment.

CECOM is currently doing an Environmental Assessment of fuel cell technology so that future communications and electronic equipment powered by this technology can be assessed for environmental issues.

ESO will likely continue this trial effort and expand it for use by PM UA.

In another direction.... In the absence of installation specific information, PM UA decided it would at least act on the traditional polluters well known to the industrial base and the EPA.

A waiver specific to application is required for use of these chemicals in or on FCS. This list a represents a significant step forward in integrating environmental considerations into Army decision-making and a terrific example of leveraging mission and pollution prevention S&T dollars. However, it is a major investment in engineering man-hours and a very large bill.

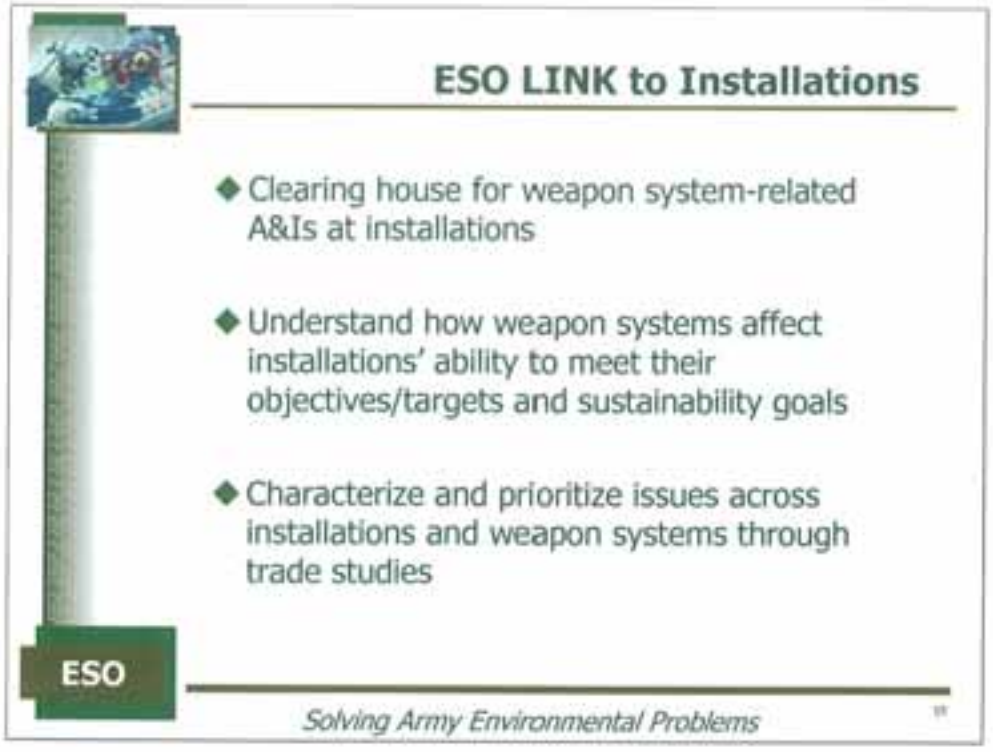
In the long-term, PM UA hopes to *get* that installation specific data and plans to integrate it into an Environmental Management System.

To jump start the process they have invited installation personnel and the Installation Management Agency to sit on IPTs during early design phases.

The Army needs to build on PM UA's initiatives to incorporate installation environmental concerns into weapon system design. This will require a culture change. This culture change has already started with the requirement to implement ISO-14001 conformant EMSs and the proliferation of Sustainability Workshops at FORSCOM installations.

However, we need to go further. ISO-14001 only refers to activities, products and services that the organization can control and be expected to influence. Without training and monitoring, installation personnel may ignore those aspects and impacts that are related to weapon systems because, traditionally, weapon systems have been *beyond* their influence.

We must create a systematic approach through which installations routinely document and communicate weapon system-related aspects and impacts (A&Is) up their Chain of Command, whether that be their BaseOPs chain or their Mission chain, and get that information to ESO.



ESO is well positioned to become a clearing house for weapon system-related A&Is at installations.

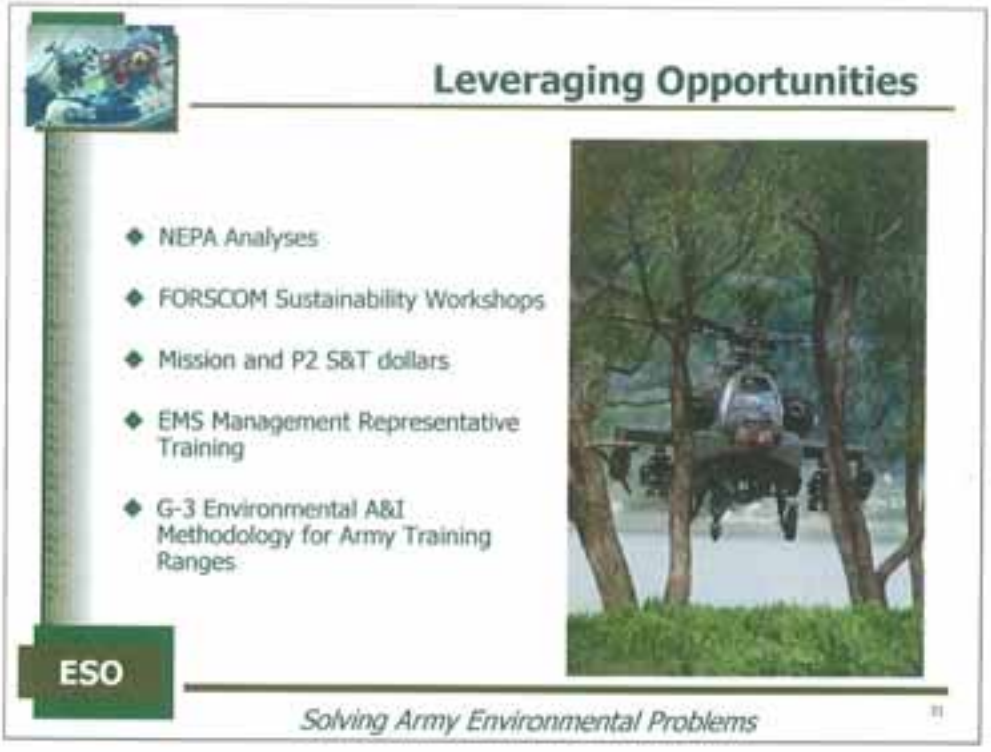
Once this information starts to flow, ESO will coordinate with appropriate personnel to understand how weapon systems affect the installations' ability to meet their objectives and targets under their EMS, and their long-range sustainability goals.

ESO will then characterize and prioritize issues across installations and weapon systems through trade studies.

ESO will feed its findings to the Acquisition Community and encourage Acquisition Managers to follow PM UA's lead in developing an EMS aligned with the installations.

Essentially, the aggregated installation A&Is can become the A&Is of the PM and point towards validated environmental objectives and targets for weapon system design. Our analysis will also identify which PMs should share the cost for the largest benefit to avoid PM UA's situation - picking up a very large bill from which many will benefit.

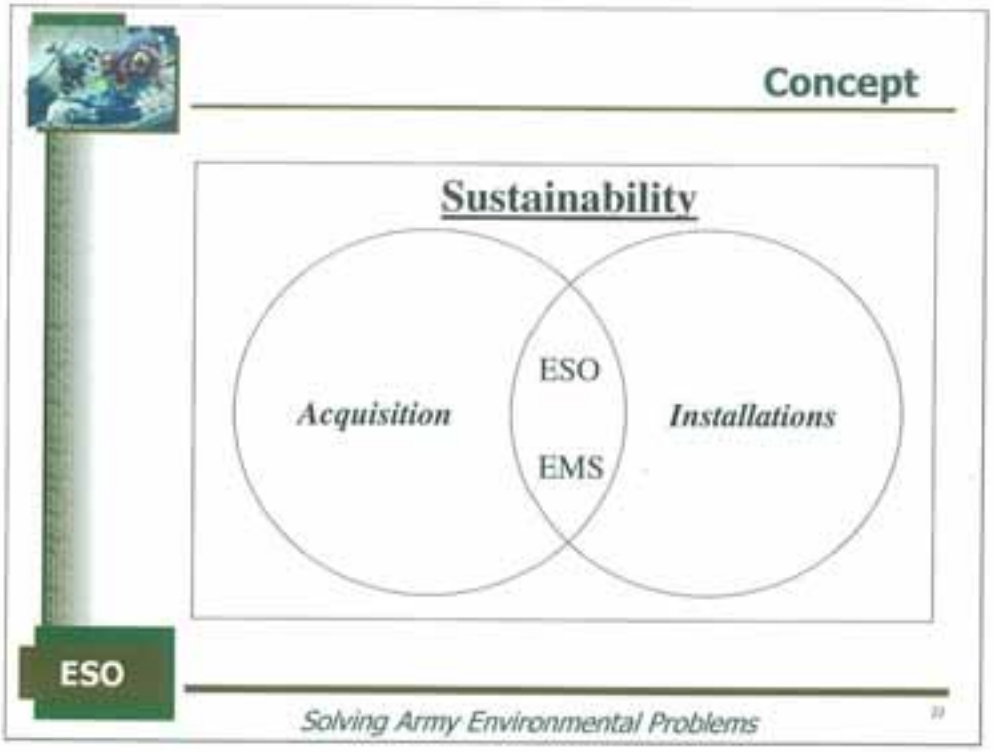
ESO will continue to provide direct support through evolutionary acquisition by supplying constructive information and alternatives for consideration in new weapon system design or legacy system re-build and re-buy.



This is no small effort and every opportunity for leveraging should be explored. I've already mentioned the NEPA Analyses, Sustainability Workshops and S&T dollars.

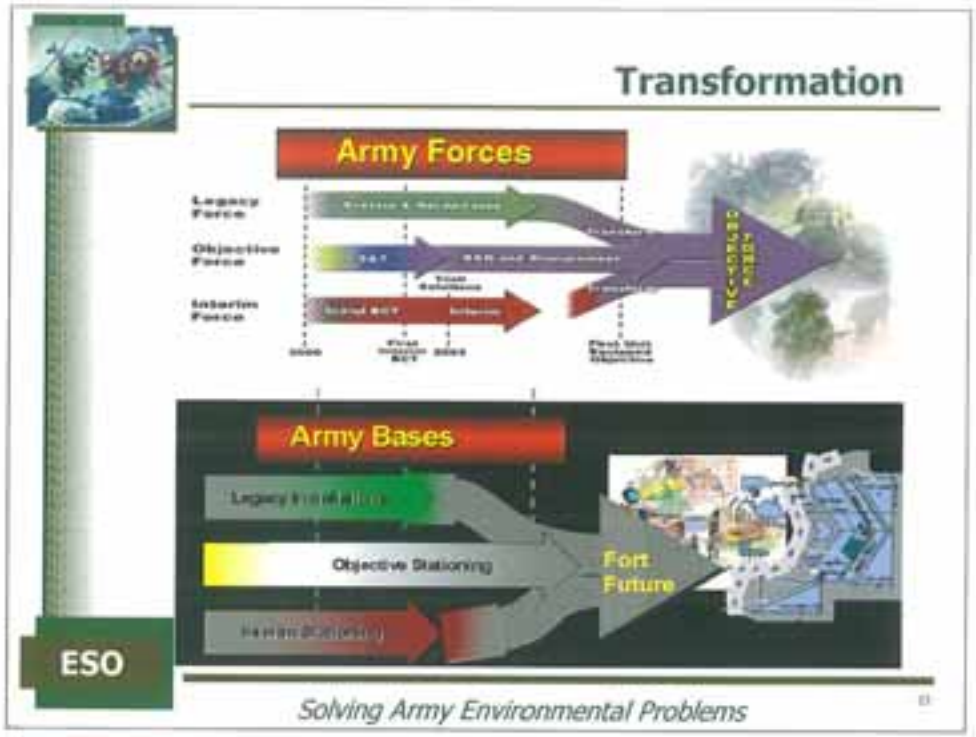
Training and creativity will be necessary to get the appropriate people coordinated and thinking in this new way. ESO will be working with the Army Engineer School, and Army Environmental Center and the Installation Management Agency to work these concepts into EMS management Representative Training.

And the G-3 methodology for identifying A&Is on training ranges will be a great way to maintain a mission focus and link environmental impacts directly to particular weapon systems.



This is a simple graphic representation of our vision. Sustainability is the ultimate goal and ESO wants to make full use of EMS concepts and tools to get us there.

The Army's approach to EMS is installation focused but the hard work and information that comes out of the effort can have a wider Army distribution and benefit.



We can not risk producing weapon systems that our installations can't support and with which our troops can't train because of environmental constraints. We may design the greatest weapon system ever, but if our troops are unable to train with it, it will be useless to us.

The Army is transforming and it is imperative that the environmental community be proactively involved in this transformation.

This means establishing installations as partners in acquisition and logistics processes rather than just recipients of weapon systems.

This will help ensure the Army's transformation brings about a sustainable Ft. Future as well as sustainable Future Combat Systems.

Acquisition Resources

- Our Information to You
  - ESO Webpage
    - http://www.environmentalsupportoffice.com/
  - PM Community of Practice
    - http://pmcop.ar.navy.mil/simplify/ev.php
  - ASA(ALT) Digital Library
    - http://library.saalt.army.mil/
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ESO

Solving Army Environmental Problems